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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/080,487	02/22/2002	Kioan Cheon	YPL-0025-P	8488

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EXAMINER

DATSKOVSKIY, MICHAEL V

ART UNIT PAPER NUMBER

2835

DATE MAILED: 05/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/080,487

Applicant(s)

CHEON, KIOAN

Examiner

Michael Datskovsky

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) 1-35 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-24, drawn to a computer comprising a liquid cooling system having a separated from an interior of the computer heat exchanger, classified in class 361, subclass 699.
  - II. Claims 25-28, drawn to a liquid cooling system for a power supply, classified in class 165, subclass 84.
  - III. Claims 29-30, drawn to a liquid cooling system for a hard drive, classified in class 361, subclass 687.
  - IV. Claims 31-34, drawn to a liquid cooling system for a CPU, classified in class 361, subclass 719 .
  - V. Claim 35, drawn to a liquid cooling system for a computer memory, classified in class 361, subclass 704.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II-V and I are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because a computer liquid cooling system claimed in the claims 1-24 can comprise many differently designed structures for liquid cooling different computer components. The subcombination has separate utility such as separate liquid cooling systems for a power supply, a hard disk, a CPU and a computer memory chip.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

4. This application contains claims directed to the following patentably distinct species of the claimed invention: a heat exchanging device for cooling a power supply having a plurality of heat-producing elements comprising a heat sink on which the heat-producing elements are mounted and which has a channel provided at each side thereof, and a U-shaped conduit fitted into a channel (claim 25); a heat exchanging device for cooling a power supply having a plurality of heat-producing elements comprising a heat sink on which the heat-producing elements are mounted and which

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has a passageway through which a liquid coolant passes, and a conduit fitted into opposite ends of the passageway (claim 26); a heat exchanging device for cooling a power supply having a plurality of heat-producing elements, comprising a hermetic container surrounding the power supply and having an inlet port and an outlet port, wherein the liquid coolant is an oil (claim 27); a heat exchanging device for cooling a power supply having a plurality of heat-producing elements, comprising a hermetic container surrounding the power supply and having an inlet port and an outlet port, the heat exchanging device having a cooling plate contacting with the outer top surface of the hermetic container, and a U-shaped conduit fitted in the U-shaped channel having a flat bottom to be securely in contact with the outer top surface and having opposite ends forming an inlet port and an outlet port (claim 28); a heat exchanging device for cooling a hard drive of a computer, comprising a cooling plate contacting with a bottom surface of the hard drive, a U-shaped conduit fitted into the pair of channels (claim 29); and a heat exchanging device for cooling a swapping type hard drive, comprising a heat collecting plate installed on the inner bottom of a computer hard drive slot, a cooling plate installed on the inner bottom of the slot; a U-shaped conduit fitted into the U-shaped channel, and a plate spring (claim 30).

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, there are no any generic claims in the case.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims

readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

5. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Datskovsky whose telephone number is (703) 306-4535. The examiner can normally be reached on Mn - Fry 8 - 4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren E. Schuberg can be reached on (703) 308-4815. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Patent Examiner

Michael Datskovsky

A handwritten signature in black ink, appearing to read "Michael Datskovsky", written in a cursive style.

May 21, 2003